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[For the N Y. Farmer and Horticultural Repository.]

ART. 134.—*A Sketch of the different kinds of Gardens in the United States, particularly those of the Middle and Eastern States, by* WILLIAM WILSON, *Nurseryman and Seedsman.*

American Gardens, like the happy and free people who possess them, are scarcely to be distinguished into separate classes. Here are to be found nothing to be compared to the highly ornamented domains that surround the palaces of many of the noblemen of England; and the employment of men eminent in horticultural science is extremely limited. Yet destitute as the humble dwellings of Americans generally are of those refined embellishments that decorate the seats of European Princes, her inhabitants are far from being stinted in the enjoyments of the most extensive and delicious varieties of horticultural products, and her humblest citizens partake in great abundance of the most delicious garden products. While in this country, no overgrown nabob can behold any characteristic contrast from the parasitic dwellings of a cottage vassalage, we observe on every hand one wide and extensive national domain of independent yeomanry; and the gardens of these may emphatically be styled the gardens of America. In England, Loudon says, the most numerous class of gardens and those which are the most widely dispersed over the British Isles, are those of the cottar, whose limited produce, according to his account, admits of no vegetable which from delicacy of culture is there considered as an article of luxury. Thus while a few of the rich and great with their domestic retinue wallow in the enjoyment of such garden products as are there thought luxuries, and which the far greater portion of the inhabitants can never afford to taste of, Americans enjoy in one universal festival, all the most choice and delicious fruits and vegetables of the temperate zone. And these enjoyments they possess, not by any superior art or skill in horticulture on the part of the cultivators; the favourableness of the climate rendering no greater degree of either necessary, than such as is exercised in the cultivation of a field of corn.

Their gardens are in general laid out upon a small scale, of from one quarter to half an acre, and are only deserving of the name on account of the fine qualities of the products which they afford; very little display of taste or skill in their arrangement being attended to. But they yield in great abundance and perfection the following valuable products:—Lettuces, raddishes, parsley, onions, beets, carrots, parsnips, cabbages, turnips, spinage, peas, kidney and Lima beans, cucumbers, canteloupe and water-melons, early corn, summer squashes, tomatoes, and pepper, with a few pot herbs and medicinal plants. No other care is necessary in this congenial climate for the cultivation of these delicious fruits and vegetables, than the labouring of the ground either by the spade or plough, putting in the seeds at the proper seasons, and keeping the whole neat and clear of weeds. On the farm department is generally planted all the varieties of pumpkins, Indian corn, winter squashes and potatoes. The small fruits cultivated in their gardens, are the strawberry, gooseberry, currants, and raspberry, and a few trees of the quince and the peach. This last, in former times, used to accompany in great abundance, every dwelling, and there is now a fair prospect of its soon again attaining its wonted prosperity. A few varieties of the pear, cherry, and plum trees are generally planted near the house, by the sides of the fences that commonly form their neat little court or door-yards, which are chiefly kept in grass, and contain from one quarter to half, an acre laid out on the front and ends of the dwelling, from the rear of which, a short lane generally leads to the barn-yard, around which is placed the hog-pen, stable, and shed-house for the oxen, cows, or other cattle. Some good baking and pie-apples line these fences in the rear, with a few stately forest trees about the yard for shade and shelter to the cattle. The kitchen garden is sometimes to be seen in front of the house instead of the open court, but more commonly it is laid out on one side adjoining it. Very little attention has as yet been paid by the proprietors, to the formation of their kitchen gardens into any kind of regular or ornamental arrangements. A great portion of many of them is prepared for their principal crops by the plough and harrow, and as regards the procuring of good crops, this mode answers far better than bad digging. But when our yeomanry become better acquainted with the great value of their choice vegetable productions, for the cultivation of which the soil and climate of this country are so pre-eminently favourable, it is sincerely to be hoped that they will pay a great deal more attention to the cultivation and improvement of these little darling spots, which, with the most

moderate degree of care, are capable of yielding at such an easy rate, such delicious sources of domestic enjoyments. It may be observed that there are a few valuable vegetables not enumerated in the above list, which contains only those that are generally cultivated in the gardens of the yeomanry. The sorts in which they are deficient, are the following four: asparagus, savoy cabbage, brocoli and cauliflower, The care necessary to be bestowed on this last in preserving the plants over winter, &c. is such as will likely long prevent its culture from becoming general. But the cultivation of the other three being as simple, and their produce as certain as any of the most common sorts. We sincerely urge it upon every family in the country, to add a small portion of each to their annual stock of vegetables. Those who are not in possession of the best selection of the various kinds of fruit trees, for affording the earliest and longest succession for the supply of their families, ought by all means to regulate their stock on such a scale as to effect this desirable end. I am not alluding to the general orchards on the farm. The homesteads that are to be met with all over the country of blacksmiths, wheel-wrights, carpenters, tanners, shoemakers, etc. frequently have but a few acres of ground attached to them, and on these, seldom any more fruit trees are planted than what are sufficient for the supply of their own families, and these are generally so judiciously arranged along the fences of their lands,etc. that they seldom interfere with any of the crops in the adjoining lots. Although these trees generally produce tolerably good sorts of fruit, yet the improvements that in most cases might be made at the most trifling expense, in altering the arrangement of their domestics, is of no ordinary degree of importance. The following is a list of a few sorts that ripen in succession, and which every householder in the country of the eastern and middle states, may have interspersed about his house and door-yards, to the great comfort and enjoyment of his family, both as respects their produce and agreeableness of shade, etc.

CHERRIES.

1 or 2 trees of the May Duke for early.
do do Bleeding heart.
do do Amber and imperial.
do do Black heart.
do do Morello and Kentish for pies.

PLUMS.

do do Cherry plum, both for fruit and ornament.
do do Drap d'or.
do do Green gage.
do do Bulmer.

PEARS.

do do Petit muscat.
do do Early catharine.
do do Green do.
do do Seckle.
do do Vigouleuse.
do do pound pear.

APPLES.

do do Bough apple, good table fruit, ripe in July,
do do Harvest, do do do
do do Codling, fine for stewing from August till October.
do do Summer rose, fit for stewing in July.
do do Maiden's blush, fine for table or pies in August and September.
do do Seek no farther, do do October and November.
do do Fall pippin, do do
do do Bell flower, do do all winter.
do do Spitzenburgh.
do do Newtown pippin.

The above list may be considered rather extensive for being all introduced about the homestead. But when a lane, as is very common, leads from some public road to the dwelling, nothing has a finer appearance than rows of cherry or pear trees on each side, and the apple trees are well calculated for shade around the yards, or along any back lane etc. and there is scarcely any situatton but might admit one tree of all the above sorts of apples, and at least three or four pears and cherries. The produce of the plum in some situations, has for many years been precarious, and except in such places as it is known to succeed, it might rather be dispensed with than any of the other sorts. A few plants of the apricot, nectarine and grape vine, might be introduced in all favourable situations. In short it is a most cheering and interesting fact, that the rural habitations of the whole American yeomanry, might, at the most trifling expense to each family, be so improved by the introduction of such a selection of fruit trees as designated above, that no day of the year might pass without their having it in their power to partake liberally of that delicious produce, which might be so arranged around their happy dwellings, that no detriment might ensue to the produce of adjoining fields, in any instances where the limits of their homesteads may be circumscribed. The far greater portion of the inhabitants of the country, having abundance of territorial bounds connected with their dwellings, the day certainly cannot be far distant, when the inhabitants will far more avail themselves of the benefits to be derived from the adoption of those modes of improvement, in the selection and cultivation of their

fruit trees, etc. for the superior and abundant produce of which, their soil and climate are so highly favourable. The alteration of the arrangement of old established fruit tress, on any man's farm, or about his homestead, is, no doubt, likely to require a work of some time, as well as a faithful continuation of the public spirited exertions of those who are well convinced of the great benefits which every family in the community would derive from the accomplishment of such important improvements. The labours of the New-York Horticultural Society have contributed much to the improvements of many of our garden products, and there is no doubt but her aid would be cheerfully extended, either to any Auxiliary branch, or distant Horticultural Association that might be formed, either in any of the interior counties of this or other states. Through the exertions of such societies, great facilities might be afforded in the general progress of very great and interesting improvements, and that too, at the most trifling additional expense to those who would be greatly benefitted. By the correspondence that would be maintained amongst such associations, a more extensive and correct information would become general throughout our country, of the actual state of Horticulture. In all the various localities, where such societies may be formed, mutual aid would be extended throughout the whole, and the increasing examples that would soon be exhibited by the members of such associations, in their improvements upon their own estates, would soon be attended with the most beneficial influences upon the conduct of all the neighborhood. Our horticultural productions are not the trash of tropical climates. They are those of the most substantial excellencies of the temperate zone. They are not extended to us with a reserved hand; but a bountiful Providence has placed within our reach, to be obtained by the most moderate degree of industry, blessings and enjoyments, which but few, if any of the inhabitants of any other part of the world possess. But while we thus behold the rich treasures which nature every where invites us to avail ourselves of at such an easy rate, we must confess there is much room for improvement on the part of the cultivators of the soil: improvements for which the period seems now to have arrived, that leave the inhabitants no longer at a loss to know how to embrace. For the long experience of many eminent men, in various parts of our country, has proved beyond any doubt, the great facility with which in every place, the most important and valuable productions of the earth, can be cultivated and brought to the greatest degree of perfection, and that too, by the same ordinary degree of cultivation that is bestowed upon sur fields of Indian corn and potatoes. What is to hinder every farmer to plant a few early potatoes in the month of April, and at the same time, and in much the same manner, plant also a dozen or two of hills of the early bush, or any other summer squash. They require no other culture than that of a hill of potatoes, and their produce will supply his family for two months of tbe warm summer season, with a daily treat, that any where would be justly considered no ordinary dainty, for tables of the most eminent horticulturalists. And in the month of May, when they prepare their ground for their Indian corn, they have but to apportion whatever part of it they think proper for their hills of cucumbers, nutmeg, and water-melons, winter squashes, and pumpkins. Their culture, in this happy climate, requires no other management than that of a hill of corn.—Of the enjoyments that their families can partake of, from the fruits of these labours, let the history of the luxuries of vegetable refinements in England tell.—Let them judge how many can partake of such things there, at the Covent Garden market prices. But we are not yet done with our yankee products. At the same period, and in much the same manner as he plants his corn, the American farmer ought to commit to the soil, the seed of a vegetable, which is not to be surpassed in any part of the world. It is the *Lima Bean*, and every farmer that plants a field of corn, ought to set a part from fifty to one hundred or more hills for it. All the extra trouble that it requires more than the corn, is merely to insert a pole two or three inches in diameter, and about ten feet long into the centre of each hill, before planting, for the plants to run on. These beans, managed much the same as the corn, begin to bear in July, or early in August, and continue one constant succession of flowers and pods, until overcome by the late frosts of autumn. Let our farmers pause. Let them ponder with gratitude at the ease with which they can see their families partake in abundance, of the enjoyments of the fruits of such productions as these. But let them not forget to yield cheerfully, that small additional labour, which is only necessary to be bestowed for their attainment. Few children could read the interesting account of the horticultural character of their country, which the valuable periodical works of the present day are so happily developing, without feeling their animated bosoms glow with ardour, to assist in the labours of the garden. And it is presumed there are but few youths in the country, from the age of seven to ten or twelve years, who could not very profitably employ a few hours every morning, in hoeing, weeding, and regulating the crops and flowers of the garden department. To those who are acquainted with the amiable and domestic virtues of our rural matrons, it is well known with what care and industry they so generally attend to the cultivation of many of the smal-

ler, but extremely useful kinds of garden products, while the active fingers of their lovely daughters, often deign to regulate and train the blooming flowers. The selections of flowers cultivated in our country gardens are very limited, but they have been judiciously chosen. The balsam, or ladies slipper; the marvel of Peru, or four o'clock's; the coxcomb's and convolvulus, or morning glory, are almost as common as the datura stramonium, or stink weed, yet the long familiarity of their yearly appearance in almost every garden in this country, has very improperly lessened them in the esteeem of those who do not know that they have long and justly been ranked amongst the most choice and beautiful of all annual flowers, cultivated in the very finest gardens of Europe; and even in America, the charming variety and elegance, in beauty of these airy flowers, will be viewed with rapture and admiration, so long as a sensibility exists, capable of being impressed with a just estimation of the most refined productions of the flowery world. Several varieties of the *phlox*, or *lychnidia*, are also very extensively cultivated in our country gardens; all perennials, and natives of the United States. They are a fine hardy and showy race of plants, the flowers of some of which yield a delightful fragrance. There are a few more varieties of perennial, biennial, and annual flowers, occasionally to be met with amongst our country gardens. The peonies and white lillies are frequently to be seen; and these collections can in all situations be most easily augmented, by merely introduciug whatever quantity may be wanted, from amongst the charming varieties of our native plants. Several varieties of our native lillies are to be found growing wild all over the country; and the fine spikes of our lobelias, glow with inimitable splendour along the verges of almost every rill. All the varieties of asclepias seem to vie with each other in beauty, upon the borders of every swamp; and the majestic corymbose clusters of the eupatorrums, wave in stately grandeur through the interior, like so many variously plumed warriors. The dark verdure of the vernonia's, is surmounted with their veteran looking clusters of red and purple; and the emblazoned rays of the helianthus's, shine like the golden attire of imperial magnificence; while the slender mikania seeks the support of some neighbouring shrub, to twine around its every limb her wreaths of blooming fragrance: and lower still, the moss clad surface of our swamps are stored with multitudes of humbler, yet many of them beautiful and interesting inhabitants. Here the curiously constructed leaves and flowers of the sarracenias and cypripediums attract the admiration of every beholder: while the sweet and beautiful flowers of the arethusa, the cymbidium and pogonias, etc. often beguile the thoughts of the enraptured visiter, by making him forget that he is wandering amidst the native wilds of America, into which, I expect the reader will think, the writer of this has digressed far enough. Cheerfully would he take a survey of a few of our beautiful native shrubs that might easily be introduced into our gardens, but the subject is too alluring to enter upon in the present sketch. Few of eur gardens are destitute of the rose bush, and with this alone, they can never be considered barren of shrubbery. An increase of a few more of the fine varieties of this is wanting, and the long blooming kinds of trumpet and sweet smelling monthly honey-suckles, becomes well the peaceful dwellings of Americans, not one of which ought, or needs to remain unornamented by these delightful, useful, and most beautiful, (the rose excepted) of all other shrubs.

[TO BE CONTINUED.]

ART. 135.—*Deterioration of Wine.*—To the Editor of the N. Y. Farmer and Hor. Repository.

Sir,—In perusing an article entitled "Adlum's Catawba wine," in the June number of your useful miscellany, I was struck with the remark therein made, that the Madeira wine imported at this day, was not of as good quality as that of forty years since, and the cause there assigned, though correct in part, yet is not wholly true. The great material reason for this deterioration is as follows: The wine merchants, as Mr. Adlum justly observes, formerly let their wine remain in large vaults or tanks, to ripen by age, and improve by time; but the present dealers, generally, to realise a quicker return for their investment in this trade, force the wine, by the process they have adopted, of what is termed "*stoving*," which is somewhat of the following manner: Instead of having wine vaults, as formerly, they now have large store houses, of two, three, or four stories high, in which they store their wine in pipes, piled in open tiers, having no floors intervening between the different lofts. At the bottom, or on the ground floor, large furnaces are erected, with flues carried through the whole building, which furnaces are kept continually heated for a length of time, thereby creating an extra degree of heat, and forcing the ripening of wine. The consequence of this process is, that one year old wine will obtain the flavour of three years; but the subsequent improvement in the quantity of the wine is forever checked, because the true vital principles are destroyed. In order however, to regulate the age of the wine for importation, they mix wine of different ages qualities, and according to the mixture, is the quality and age of the wine commercially stated. This infor-

mation I obtained from personal observation, during a short residence in that Island, some years since.—I have no doubt but that the quality of the Madeira wine has much deteriorated from what it formerly was, in consequence of the mode above described being adopted in preparing it for market. I resided in the Island of Teneriffe for many months, and paid some little attention to their manner of preparing wine for exportation. The wine merchants do not stove their wine, but mix the same of different ages and quality, according to the character they wish to stamp it with in shipping it; from London particular to India market, superior cargo, and common cargo wine. Should there be any connoisseurs in wine in your place, who have observed the difference in Madeira no doubt they could state, that in some Madeira wine, they could perceive no improvement whatever; which is owing to the treatment before stated. I have drank wine of a purer quality and better flavor in Teneriffe, than any Madeira wine that I have ever tasted. It gives me much pleasure to observe that great attention is beginning to be paid to the cultivation of the grape generally, and the making of wine in our country. I sincerely hope that the time is not far distant, when the American public can be as independent in the production of good wine, as they are in many other articles of foreign aid. If the above remarks, in your opinion, are worthy of publication, you are welcome to them.

I am respectfully, yours &c.

J. O. D.

Albany, Aug. 1828.

[ORIGINAL.]

ART. 136.—*A short Treatise on Botany.—Continued from page* 188, *No.* 8.

VIII...OF THE CLASS OCTANDRIA.

One of the prettiest plants of this class, is the nasturtium *tropæolum majus*, which Linnæus named the Trophy plants, from its leaves being shield like, or peltate, and its flowers something like a helmet.—It is a native of South America, but is very commonly cultivated here. The cranberry *oxycoccus*, with its large scarlet berries, which are brought in large quantities to our market, is an octandrous plant. So are also the heaths *erica*, a very large genus of plants, principally found at the Cape of Good Hope, and one or two species in Europe, which abound in wild uncultivated plains. Further examples are the lace wood of Jamaica and St. Domingo, *lagetta lintearia*, from the inside bark of which, a kind of net work, similar to lace is produced; and a remarkable plant, native of the Isle of France, *calanchoe*, having a pinnate leaf, the leaflets are toothed, or indented, and from each of their indentures a radicle is put forth, which takes root and becomes a new plant.

IX...OF THE CLASS ENNEANDRIA.

This is a small class. The camphor tree, *laurus camphora*, and the cinnamon tree, *laurus cinnamomum*, are enneandrous plants, as also the sassafras, a species of *laurus*, and the rhubarb, whose root is extensively used in medicine, and cultivated for culinary purposes.

X...OF THE CLASS DECANDRIA.

The decandrous class is numerous in interesting plants. Many leguminous plants are found here; as the sappan wood *cæsalpinia sappan* of the West Indies; the wild locust, or *cassia fistula*; the log-wood *hæmatoxylon campechianum*; mahogany *swietenia mahogoni* of South America. One of the most singular decandrous plants, the *venus' fly-trap, dionæa muscipula*, is a native of North Carolina, growing wild in the swamps, and now cultivated in all parts. Such is the remarkable nature of the leaves, which are furnished with long rigid fibres, bent upwards, that when a fly or other insect touches them, they immediately close and capture any thing which comes between the two halves of the leaf; a property, perhaps, of irritability, similar to what is observed in the sensitive plant. The splendid sheep laurel of our country, the lovely *kalmia*, the pride of the American flora, is also a decandrous flower, and there are five different species of it, which for the delicacy and elegance of their blossoms are not to be surpassed by the products of any other country. The corolla is shaped like a salver, or wine glass, with its upper part or limb, having at the bottom five exterior knobs or projections; the anthers are at first bent with their filaments so as to be lodged in the interior cavities, corresponding to the knobs. The family of pinks, *dianthus*, are also included in this class.

XI...OF THE CLASS DODECANDRIA.

Of the dodecandria, the mangostan, a most delicious fruit of the Isle of Java, *garcinia mangostana*, is a remarkable example. A species of the same genus furnishes the gum from which the beautiful colour called gamboge is produced, *garcinia cambogia*.—The purslain *portulacca*, which is so common a weed with us, and is supposed to have been introduced; and the house leek, *sempervivum*, also a foreign plant, are of this class.

XII...OF THE CLASS ICOSANDRIA..

One of the first of this division, is the *cactus*, or prickly pear of our country. What at first might be-

taken for leaves, are only the broad flat jointed stems, one of them growing at the top of the other, while the place of leaves is supplied by the thorns, which grow on the sides in fasicles, and are very small like bristles. The *C. opuntia* bears, a beautiful yellow flower, which is succeeded by a succulent fruit of agreeable flavour. There are several remarkable species of cactus. In particular, the wonderful night-blooming *C. grandiflora*, which blows at night, and bears a most magnificent flower of a foot in diameter. There are also many valuable fruit trees of this class. The cherry, *prunus cerasus*; plum, *P. domestica*; the peach, *amygdalus persica*: almond, *a. communis*; the apple, *pyrus malus*; pear, *p. communis*; all these are fruits of foreign growth, which have been transplanted to our country, and thrive in our climate exceeding well. We have also many native wild fruits of these kinds, as the crab apple, or *malus coronaius*, which, if cultivated, will no doubt in time produce a very excellent fruit. Our wild cherry, *prunus virginianus*, is a pleasant fruit, which, by cultivation, will add to the number of our table luxuries. The beach plum, *prunus maritimus*, is a very agreeable fruit, even in its wild state, and the chicasaw plum, *p. chicasa*, promises to be a valuable addition to our stock of garden fruit. The blackberry, *rubus*; the flowing raspberry, *r. odoratus*, the flower of which is beautiful, and the fruit excellent, being large, yellow, and of a delicious flavour; and the delightful strawberry, *fragaria*, are also included in this class.

XIII...OF THE CLASS POLYANDRIA.

The *poppy* belongs to this class. From this plant is derived the *opium*, which is so extensively used in medicine for its soporific effect; it is gathered from the capsule, by wounding it while yet green, and gathering the juice which is milky and hardens. This class is rich in elegant flowers: as examples we might particularize the beautiful *nymphæa*, or water lilly, which adorns our fresh water streams and lakes, and is remarkable for the long petioles of its leaves: the singular *sarracenia*, or side saddle flower, a swamp plant, with a leaf like a wine glass capable of holding water; the delightful West India fruit, the *mammea americana*; the fragrant orange, *citrus aurantiaca*; shaddock, *c. decumanus*; the tea tree, so remarkable for its refreshing beverage, which is extensively used in various parts of the world. There are three species of this tree. *Thea viridis, bohea*, and *cochinchinensis*. The different kinds of green tea, are all the products of one tree. The difference in the quality of the leaves is entirely owing to the different seasons in which they are gathered. The younger leaves are of the better kind, and the larger or autumnal leaves, inferior.—The black tea is of a different species from the green, and the qualities are owing in the same manner to the difference of gathering. There is no tree which in the elegance of its flower and leaf, can exceed the common forest tree of N. America, called white wood or tulip tree, *liriodendron tulipifera*. The flower is of a greenish yellow colour, and resembles in form the tulip, while its leaf is of a peculiar shape unlike any other plant. It is three lobed, and with the middle segment truncated, or cut off square.—Our swamps are also variegated with the splendid *magnolia glauca*, with its large snow white flower and green leaf, with its under side of a silver hue.—Several other species of this magnificent genus are found in the southern states, or are cultivated in our gardens and hot houses. In particular *m. macrophylla*, produces a flower of extraordinary magnitude. Another plant of this class, remarkable for the large size of its flower, is a species of *nelumbium*, which grows in the waters of our southern states.

ART. 137.—*Papers directed to be published by the delegation of the United Agricultural Societies of Virginia.*

A communication from Dr. William J. Cocke, read before the Agricultural Societiy of Sussex, on the 14th May 1822.

Wishing to elicit from others information on the following subjects, I am induced to offer for the consideration of the Society the following crude observations on, *The proper temperature of Soils: The comparative advantages of green or dry vegetable matter ploughed into land, and the application of all other vegetable and animal manures.*

PROPER TEMPERATURE OF SOILS:

As far as my limited researches into the science of agriculture have extended, I have not been able to find a single instance, in which the proper temperature of soils has been the particular subject of any essay—nor has the subject excited that degree of attention, which, in my humble opinion, it eminently deserves. It is universally agreed, that a portion of heat is essential to the amelioration of all soils, and the growth of every vegetable; but what that degree is, has not yet been ascertained.

The estimated temperature of the earth is about 48 degrees of Fahrenheit's Thermometer, but as the three kinds of earth Silicious, Calcareous and Aluminous, which are considered necessary to the formation of perfect soil, differ materially in their powers of conducting the principle of heat (or caloric,) we may rationally infer, that wherever the composition of the soils is considerably altered in rela-

tion to the three kinds of earths, that the temperature is likewise materially affected. The first of these earths is a rapid conductor of heat, the second moderately so, and the third a very bad conductor; and their affinities for moisture seem inversely with their powers of conducting heat. From this circumstance, we may conclude that neither of the three can be left out of a soil without injuring its aptitude to the retention of a due degree of heat and moisture.

Thus we find that wherever sand very much predominates in a soil, its temperature becomes so high and its affinity for moisture so small, that it dissipates all other matters necessary for the growth of plants. Wherever calcareous earth predominates to excess, in a finely divided state, (from its power of being dissolved by water, and its antiseptic powers*) it becomes so hard as to resist the roots of vegetables, consequently this is the most useless of all soils.—Again: a soil in which clay predominates to excess, becomes so cold and moist that vegetable matter ploughed into it remains so long without fermenting as to be nearly useless to the succeeding crop. To this it may be said, that a soil composed properly of sand and clay would remove the above objections.—True: but these two earths have no chemical action on any thing which comes in contact with them. The different acids formed in the process of fermentation are left free in the soil, and act manifestly to the disadvantage of all vegetables fit for the consumption of man or animals. Water is likewise a very bad conductor of heat, so much so, that a soil retaining an undue quantity, becomes and sterile.

DRY OR GREEN VEGETABLE MATTER PLOUGHED INTO LAND.

But few subjects deserve more extensively the attention of farmers than this, particularly in this part of the country, where we are compelled to depend principally on the spontaneous production of the soil for the nourishment of the future crops; and there is no subject treated of, in the books on agriculture which I have had an opportunity of reading, on which there is a greater contrariety of opinion. In the elements of Agricultural Chemistry, by Sir Humphrey Davy, we find the following observations, p. 249.—"When green crops are to be employed for enriching a soil, they should be ploughed in, if it be possible, when in flower, or at the time the flower is beginning to appear, for it is at this period that they contain the largest quantity of soluble matter, and that their leaves are most active in forming nutritive matter."

* This power seems to be reversed when the quantity does not exceed 15 or 20 per cent.

Again, in Sir John Sinclair's Code of Agriculture, appendix, page 374. "When manure is deficient, The ploughing in a green crop of peas, of buckwheat, &c has often been resorted to, but this practice is found not to answer. Buck-wheat was ploughed in for several years in Lincolnshire as a manure, but ultimately given up, as doing no good."

This sentence is immediately followed by a note by the American editor. "Very different is the result of practice in this country. The superior condition of much of the old tillage land of Pennsylvania, may be fairly attributed to turning in green crops of clover and buckwheat."

In the foregoing extracts we find evidence on both sides of this important question, which leaves the farmer, who reads for his improvement, at a loss to which side to give credence; nor can his own experience settle the question, until he has fairly experimented on every variety of soil that comes under his management, without having reference to the principles heretofore laid down.

Vegetable matter (other circumstances being favourable) will commence fermentation at the temperature of 55 degrees of Fahreheit's thermometer, and the disposition to fermentation increases with increased temperature, until the temperature arises to 80 degrees. Sixty-seven and a half is the middle of these two extremes, which we will take as the standard degree at which fermentation would go on to the greatest advantage in the soil.

Should this and the foregoing propositions be true, we may conclude that whenever the temperature of the soil rises above the standard (or sixty-seven and a half degrees) it will be necessary to plough the vegetable matter into the land in that state, (dry) best calculated to resist fermentation, and whenever it falls below the standard temperature, it will be best to plough it in, in that state (green) which is best calculated to promote fermentation. This brings us to the conclusion, that all the opinions heretofore quoted are correct as far as they were governed by the particular soils and circumstances under which they were formed, but incorrect in a general point of view, as a standard from which a farmer should draw his opinions for the management of his farm.

In the spring of 1819 I subjected these opinions to the test of one experiment on two pieces of land about equal in fertility, but one a warm light soil, and the other a close cold adhesive soil: on each of these a quantity of dry vegetables was put, under circumstances as nearly equal as I could make them, and they were both tended in corn in the same way.—The corn on the light land was immediately benefitted and continued to improve throughout the year, whilst that on the other received no apparent benefit.

nor has the land of the last been benefitted on a ratio half equal to the first.

ON THE APPLICATION OF ALL OTHER VEGETABLE AND ANIMAL MANURES.

I will introduce this subject by another quotation from the pen of Sir H. Davy, page 6. "There has been no question on which more difference of opinion has existed, than that of the state in which manure ought to be ploughed into land, whether recent or when it has gone through the process of fermentation, and this subject is still a question of discussion; but whoever will refer to the simplest principles of chemistry, cannot entertain a doubt on the subject. As soon as dung begins to decompose, it throws off its volatile parts, which are the most valuable and the most efficient. Dung which has fermented so as to become a mere soft cohesive mass, has generally lost from one third to one half of its most useful constituent elements: it evidently should be applied as soon as fermentation begins, that it may exert its full action upon the plant, and lose none of its nutritive powers."

This sentence would have been sufficient of itself, to point out the proper time at which manure, composed of animal and vegetable matter should be applied, and no doubt there would have been a greater unanimity of opinion on this subject, was there not some other circumstance affecting it, than its particular state of fermentation at the time of its application. This circumstance I conceive to be the temperature of the soil, nature's great laboratory, and it is to this we may attribute the great diversity of opinion on this otherwise simple subject. But however diversified this opinion may be, we can discover a beautiful concatenation of ideas in the several authors on agriculture. Thus wherever one recommends the use of green vegetable matter, he will likewise recommend the use of well rotted manure, and where one recommends the use of dry vegetable matter, he will advise undigested manure.

This is extensively shown in the writings of Judge Peters, and Col. John Taylor, the first recommending green vegetable matter and well rotted manure, with other means of promoting decomposition, such as lime, burning, etc. which shews that it is necessary to encourage decomposition on his soil; whilst on the other hand, Col. Taylor recommends dry vegetable matter, and undigested manure, shewing that the land on which he operates has the power of rotting, whatever is ploughed into it, to excess, which renders it necessary to make use of such applications as are best calculated to resist fermentation and evaporation.

The foregoing observations are respectfully submitted to the consideration of the society, under the hope that some member more competent will improve upon them, by

WILLIAM J. COCKE.

ART. 137.—*Proceedings of the New-York Horticultural Society.*

SEPT. 2d. A seedling plum raised by Mr. Peter Bergen, of Gouwannis, was presented, measuring 6 3-8 inches, by 5 7-8, and fine flavoured.

SEPT. 9th. Mr. W. R. Cooke exhibited from his garden a beautiful Polianthes Tuberosus and a specimen of the Centaurea Americana, the largest flowering species of this splendid genus, from Arkansa.

Mr. Parmentier presented several varieties of the Grape from his extensive vineyard near Brooklyn, viz: Yellow Chasselas, Imperial Gray Tokay of Hungary and Meunier, flowering specimens of Ximenesia encelioides, Zinnia elegans, Rudbeckia amplexicaulis, a variety of Rose of most delightful fragrance, called Rose noisette a cœur jaune, also a specimen of the Japan Soap Tree, Koelreuteria paniculata, a fine flowering shrub, capable of being perfectly acclimated here, having stood the preceding winter without cover.

SEPT. 16th. Mr. Aymar presented some fine bunches of Chasselas grape from his garden.

Mr. Wilson presented some musk melons from his garden at Rose Hill, named by him the "Murray Pine Apple melon," which was pronounced to be one of the most delicious varieties of that exquisite fruit, also flowering specimens of Martynia proboscidea, Bignonia grandiflora, Eupatorium cœlestinum, and Dracocephalum virginicum.

Mr. Floy, some flowering specimens of Gillia capitata from Columbia River.

Mr Parmentier, from his vineyard near Brooklyn, Red chasselas, Violet muscat, Bon pinant de Bourgogne grapes; Holland plums, Seckle pears, White Virgalouse and Fall Bergamot do. and a seedling Peach of the cling stone variety.

SEPT. 23d. The committee inspected some fine Grapes from Mr. Cooke, and Musk melons from Mr. Wilson.

Mr. Hogg exhibited a splendid assortment of flowering plants, among which the most remarkable were the Bouvardia triphylla, Lagerstroemia indica, Phlox euavcolens, Begonia Evansii, Asclepias linearis, Coreopsis lanceolata and verticillata, Salvia splendens.

SEPT. 30th. Mr. Wm. Phelan presented the ripe fruit of the Cydonia japonica.

Mr. D. Phelan, a sample of the tubers of the native Chili potatoe, cultivated by him from seed.—

The first crop of this potatoe did not contain any tubers, the roots being altogether fibrous. The samples exhibited were produced after the plants had been cultivated a year and a half: also from the garden of Dr. Hosack, a Bell squash of uncommon magnitude.

Mr. Parmentier exhibited another example of his success in cultivating the grape, having brought for inspection fine samples of the Meslier de la Champagne, a sweet thin skinned grape, which Mr. P. recommends for making wine; also specimens of the Boltonia glastifolia, a flower of our southern states, highly ornamental.

Mr. Oakley exhibited a remarkably fine bunch of grapes, from the gardens of Mr. P. W. Engs, raised by him from seed of the Malaga grape. The sample was the first fruit of the vine, now in the fifth year of its growth, and the berries were remarkably firm, large, and well flavoured.

West Point, 22d August, 1828.

ART. 138.—*On the cultivation of the Native Grape by Professor Gimbrede.*

To Dr. Hosack, President of the Horticultural Society of New-York.

Sir,

It is said that every man owes something to the community in which he lives. As I admit the truth of this obligation, it gives me pleasure to address you on the subject of *American Grapes and Vineyards.*

The agricultural and moral interest of the country seems to call for such information, and if I may be permitted to offer an opinion, the results of my own experience and observations in France, and in this my adopted country, after a residence of twenty-six years, I shall deem myself happy if I can give a useful example to follow.

I well know the many respectable opinions already published on that subject, and therefore wish to support by facts only, the feasibility of improving your native Grapes, and to help to counteract the most injurious of all prejudices, namely, *that you must plant your vineyards in America, with the vines of the continent of Europe!* and thereby trample under foot, and sweep off from the surface of this *highly favoured land*, with a culpable indifference, some of the most valuable varieties, many of them quite unique, *which the great God of Nature kindly provided these United States.*

Allow me to say, that such facts as these are altogether unreasonable, and therefore expect much from your patriotic and scientific Association, in protecting and diffusing a true knowledge of your internal agricultural resources. I cannot pass unnoticed, the prevailing idea that the land of vineyards are the Southern and Western States. I hope I shall be permitted to add, come and see a flourishing one on the banks of the *beautiful Hudson!* Moreover, many who have attempted to plant their vineyards in that section of our country, have not been always successful, and therefore have abandoned it.

I shall point out at some other time, the causes of their failure in this country. Every farmer wishing to cultivate vineyards, ought to know this fact, that in Europe there are not two counties, sometimes not even two fields, that will ever produce the same reputable wine, planted with the same stock; and if planted here, you certainly could not expect to be more successful; and if made here with the vines of Europe, you could not call it a real American wine: therefore, what I should say would constitute a real American wine, would have a distinct character in the taste and flavour—a pleasing variety for the table— a *non-such*, made with the best varieties of the Fox Grapes, improved by culture. Such wine would soon find its way to Europe, and command a high price.

On a subject like this, so important, and on which volumes have been written, I know not where to stop my remarks, and can only hope to awaken the public interest on their own resources and comforts.

Having made it an amusement this seven years past, to inure some of the native Grapes, I have obtained several very valuable varieties from my seedlings, and have also much improved others by culture. The nursery which I have at present at West Point, may enable me to plant two acres next season.

I wish it to be perfectly understood, that I am an an advocate for some few of the varieties of the European Grapes in our gardens only for the table, in addition to the Isabella and a few others of this country, which not only are good for the table, but are excellent to make wine.

You will please to accept some few of the American Grapes and others, for the Anniversary Dinner of the Horticultural Society of New-York, but have to send them before the full developement of the saccharine principle; but if you should be desirous of viewing them when fully ripe, it would give me much pleasure to furnish you with some.

Receive, Sir, the assurances of my esteem and high consideration,

THOMAS GIMBREDE.

The following extracts from the Addresses, delivered before the New-York Society, will be read with interest by all who are interested in the success of Horticultural Science. The Society before whom these interesting exhibitions are annually made, continues to extend the sphere of its usefulness, and to increase its members daily. In order to appreciate the benefit of such an institution, it is necessary that a comparison be made between the actually existing state of gardening in our neighborhood, and its condition previously to the institution of the Society. The difference is sufficiently obvious. A better taste prevails in the planning and decorating of our gardens, and a much greater variety in the selection of ornamental flowers, and particularly in the cultivation of excellent fruit. The Society embodies our principal practical gardeners, as well as many distinguished amateurs, and maintains an active correspondence with some of the most eminent Horticulturalists of Europe. Moreover being entirely guided by public spirited motives, it deserves the support and patronage of the community.

The extracts from the excellent discourse of Dr. Hosack the president, exhibits the progress of the Society, and the importance of similar institutions, while the brilliant effusions of the Reverend Orator, most impressively recommends and displays the enjoyments of Horticulture.

"*Extract from Dr. Hosack's Address.*"

Allow me to congratulate you upon the increasing prosperity of this Institution, and the benefits it has conferred upon the community, by means of the spirited exertions, more especially, of those who are very properly denominated its *practical members*, and without whose aid, this Society could not claim the patronage it receives from our fellow citizens.—These improvements have been manifested, not only in the cultivation of the ordinary esculent vegetables that are considered among the *necessaries of life*, but also by the introduction of those plants that are deemed among the *luxuries* of the table. We now can truly say, that in the city of New-York, we scarcely meet with a vegetable of indifferent quality; and these too, it may be added, owing to the zeal as well as the skill of the cultivators, are now brought to our markets at a much earlier period than was formerly the case: vegetables too, which twenty years ago were scarcely known in this country, are now cultivated in great abundance and of the finest quality; among those may be enumerated, the Cauliflower, the Broccoli, the Tomatos, the Okra, the Salsafy, the Egg-plant, the Artichoke, the Crambe Maratima or Sea Kale, and the Rhapontic Rhubarb, the stems of the leaves of which make one of the best tarts o. the table, equal, if not superior in taste and flavour, to the Currant or Gooseberry. These plants, which are among our highest gratifications, are now to be found in our markets in the greatest abundance. I am also happy to observe, that our *native grapes* have been successfully transplanted from our woods, and have been very much improved by domestic culture, and have thereby given rise to varieties, which within a short period, may supply our tables with American wines of various qualities, not inferior to many of those imported from foreign countries. A communication which I have received from Mr. Adlum, in the District of Columbia, accompanied with two bottles of *Catawba wine*, the produce of American grapes, as prepared by him, will be this day submitted to your taste. Another specimen of domestic wine, prepared from the Currant, in 1822, will also, I trust, encourage you to extend your attentions to our domestic fruits, for the purpose of supplying our tables with salutary substitutes for ardent spirits. A few bottles of wine obtained from the same fruit, and prepared by a lady,* resident on the Raritan, New-Jersey, distinguished for her talents and attainments, and especially for her enterprise in the cultivation of our best fruits, are also this day received, to be presented to this Society. A communication from Professor Gimbrede, of West Point, relative to the culture of our native grapes, will also, I am persuaded, be received with great interest, especially as it is accompanied with the fruits themselves, as an evidence of the value attached to them by their successful cultivator.

I must also, gentlemen, he permitted to remark as a subject of congratulation, but without being considered as participating in the political feelings that at present divide our community, that it is very honourable to the present administration, as it was to that of Mr. Jefferson, that the attention of the government is now directed, not only to the discovery and culture of the indigenous plants of our country, but that measures are actually taken to introduce from abroad, those trees, shrubs, and other vegetable productions, that may prove useful in Ship-building, in Agriculture, in the various arts of life, as subservient to the table, or as useful in the healing art.—And we trust that the period is not distant, when we shall also, under the auspices of the general government, see institutions and repositories established for the preservation and propagation of those productions in different parts of our continent, adapted to the various climates from whence they severally may be obtained; for we now enjoy a country that supplies a soil and climate suited to every plant of the

* Mrs. Griffiths.

earth, from the ship-timber of the Baltic, to the spices and fruits of the Tropics."

"*Extract from Mr. Schroder's Address.*"

Assembled at this interesting season of the year, it is peculiarly proper for us to indulge those sentiments which our Association would inspire. The horn of plenty overflows with its abundant fruits; the gardens and the fields are glad; the groves and forests are resounding with a cheerful harmony.—And while on every side the valleys and the hills rejoice, we may appropriately celebrate our festival.

We have a high sanction for the sympathies which we have assembled to indulge. When the Beneficent first chose a scene to occupy our intellectual and moral faculties, having "planted a garden eastward in Eden," he there "put the man whom he had formed." And when Earth, and "all which it inherit," shall have passed away, within the precincts of a future world the ransomed shall partake of joys, that are depicted under the alluring imagery of a garden. Refreshing bowers and luxuriant verdure, a pure crystal stream, sweet fragrance and delicious fruits were man's first blessedness, and are the graphic *emblems* of that final bliss which is reserved for him.* It was a Paradise that we have lost; we are to regain a Paradise.

While we yield to the emotions that are suggested by our Anniversary, we may be enlivened therefore by this interesting thought:—We are engaged in the promotion of an object suited to man's highest earthly destinies.

It is calculated to afford the *intellect* abundant themes, to which a patriarch's long life might with unceasing gladness be devoted; for it extends above, beneath, around us, rare beauties that are without limit, and varieties that are without end; it is replete with the animating pleasures of discovery, and the calm delights of contemplation. It is calculated also to affect us by yet higher and more wholsome influences; for it can act upon the *heart* with a benignity, that has power to allay the angry passions of the breast; it can promote our peace on earth; and it can fill us with pure sentiments and holy breathings.

Let us, then, exult to day, in these attributes of our subject.

I. We have said that it was calculated to engage *the intellect.*

There is no human science that is more ample in its range, or more attractive in its multiplied allurements. It unfolds to the astonished view a living landscape—the wide world; and as its votary pointed to the Eastern and the Western Hemisphere, it leads him, in full vision of the extended scenery, to look abroad. It then invites his contemplation to the bold draft that marks *its outline.*

In all that may appear so wild and scattered, in these multitudes that teem throughout the vegetable kingdom, it discerns an exquisite gradation,

"Fom the proud woods, whose heads the sky assail,
To the low violet that loves the dale."

And it disposes all, with a regard to that established order, which is proclaimed by their *peculiar characteristicks.* With a philosophick eye, it dwells upon *the parts of which they are composed,* and it again developes every where the rudiments of "heaven's first law." It views the *external* forms which plants exhibit, and sees them to be well ordered both for nourishment and re-production. It names, it classifies, and it describes the gifts of Flora. Within the bounds of four and twenty classes, it brings no less a multitude than thirty thousand† species. It beholds their *internal* organization. It explains the Physiology of plants.‡ It sees them pass through their successive states, from their incipient existence, to the period when they have attained maturity, and sink again into their native dust. Their numerous causes of *disease* are also carefully detected; the favourite places of their *habitation* are distinctly marked; and whatever is connected with the peculiar traits, which they assume, is made a theme of accurate and laborious investigation.§ The details resulting from this scrutiny abound in interesting facts.

But it is the province of our subject to indulge a range still wider. It investigates the *geographical distribution*‖ of the vegetable families, in which it every where discovers a variety the most pleasing, regulated by established general principles. It explores the surface of the globe, with a regard to its various qualities of *soils and earths;* and here Geology and Chymistry, its handmaids, decorate it with new charms. It is concerned also to improve and renovate the earth by *fertilizing agents;* and the ve-

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* Compare Gen. ii. 8. 9, 10. and Rev. ii. 7. xxii. 1. 2. 14.

† See Decandolle and Sprengel's *Philosophy of Plants,* P. II. Sect. 122.

‡ An excellent popular treatise on *Vegetable Physiology* is contained in the *Library of Useful Knowledge,* P. I. No. 14. Nov. 1827.

§ On the several subjects suggested in this paragraph, the "Philosophy of Plants" will abundantly supply useful information.

‖ The "Essai sur la Géog. des Plantes par Al. de Humboldt et A Bonpland" is full of interest.

getable, animal, and mineral kingdoms here conspire in its cause.¶

With an admiral ingenuity excited by its wants and its emergencies, from age to age it has contrived *implements, machines*, and other *articles of mechanism*. In the history of these, is comprehended much to entertain and discipline the mind.

With parental care, it rears appropriate *structures*, for the nourishment, security and preservation of its household; it erects larger *edifices*, both for use and ornament; and it disposes all, with a regard to the just principles of taste. Its gardens thus are *Landscapes*, where the useful and agreeable, as lights and shades in the *chiaro-oscuro*, charm the eye.

These amiable scenes are the abode of the amiable genius of Horticulture. She ranges the wide world with an indefatigable assiduity; she gathers, and transfers, and naturalizes, and adapts to our use, whatever can regale the senses. And it is her enviable occupation "to dress and keep" what she has thus gathered and arranged. A boundless theme is here presented; it is the *application* of her Art. It is to sow and plant; to prune, to train, and to transplant; to propagate by grafting, cutting, budding, layering and inarching. And connected with these operations are remarkable phenomena, that lead the mind to pleasing and to elevating thoughts; for it may thus dwell on many of the most interesting pages in the book of Nature.

Both as a Science and as an Art, if it be properly appreciated, Horticulture is abundant in resources. It has occupied the meditations of the learned, in all countries and at all periods of the world, as is demonstrated by *its Literature*. Within its gardens are inscribed the names of Hesiod and Homer, Aristotle and Theophrastus. Xenophon and Ælian, Cato, Varro and Palladius, Martial and Horace wandered there. Beneath its shades, and in its cool retreats, a Virgil could repeat his Eclogues. Dioscorides, and Pliny too, and Columella lingered in its fragrant walks. All these conspire to commend the fascinations both of Flora and Pomona. To their shrine each realm of Europe has sent multitudes of votaries. From Britain the ingenous Bacon, and the philosophick Evelyn, and the poetic Cowley mingled in the throng; and in their train were Milton, Addison and Pope; Thomson, Shenstone, Cowper, Mason; Walpole, Darwin, and the illustrious Sir Joseph Banks. And from the continent, amid a bright array of genius and learning, we may recognize a Buffon, a Delille, and a Saint-Pierre, in France; in Germany, a Hirschfield and a Herder; in Swisserland, a Conrad von Gessner; and in Sweden, the renowned von Linne. Such¶ famed scholars and historians, poets, statesmen and philosophers commend our subject by the various contributions, with which they have themselves adorned it. To dwell in contemplation on those spots, which by their presence they have consecrated, gratifies the generous mind.

And other pleasing themes await the votary of Horticulture. With a retrospective view, he may recur in meditation to its *Ancient History*, and be refreshed by its alluring visions, as they pass successively before him.

He now sees man's first place of bliss,

> ——"planted with the trees of God,
> Delectable, both to behold and taste."

Now the gardens of the Hesperian nymphs, with every classical embellishment, attract his eye. He sees the Babylonian terraces, which, by the magnificence of art, and the luxuriance of nature, formed a wonder of the world. The pleasure grounds of Solomon, described in Scripture; and the gardens of Laertes and Alcinoüs, which Homer has immortalized; the far famed Sardian retreat, which Cyrus cultivated; the Panchæan paradise and the Orontian grove, *here* rise in their enchantment. *There* appear the celebrated vale of Tempe; and the Academus and the Lyceum, each associating nature in her loveliness with philosophy in all its pride. The splendid works of ancient Roman sumptuousness are seen displayed by a Lucullus and a Hortensius; and to these villas that extend round the Imperial City, the orators, the poets and the philosophers of Rome invite the student who would sympathize in their emotions. Such is the Ancient History of Horticulture.

And the first rosy light, that beamed after the dark ages, kindled a new radiance about our subject. It is thus encompassed by the attractions of its *Modern* History. The gardens of Holland and the Netherlands feel the influence of Science and the Arts revived. The atmosphere of Italy and France next breathe rich odours. They soon scent the isles of Britain; they pervade the continent.

This department of our subject draws its *copious* details from the political and moral state of Europe,

¶ Loudon, in his *Encyclopedia of Gardening*, Lond. 1827, has collected much that is very curious and instructive, on the topicks contained in this and the two following paragraphs.

¶ It may be invidious to *select* from the distinguished names of those who have adorned and illustrated our subject; but it has been my aim, to present a view of *various* minds, *all* kindling at the contemplation of the same source of light.

while the last four hundred years have been inditing their momentous records. To the understanding of the intelligent it here offers a rich feast; for its garlands have allured the eye and called forth the emulation of the Medici in Italy, Louis XIV of France, Peter the Great of Russia, and the most celebrated literary worthies, and benefactors of the human race, in every region of the world. Since the invention of the Microscope at the beginning of the seventeenth century, the most wonderful discoveries, alluring multitudes to the pursuit of vegetable science, have given animation to their diligence, and recompensed their toils.

The History of Horticulture thus puts forth its buds and thus expands its flowers, in Ancient and in Modern times.

When the inquirer, who is curious to learn its *present state*, ascends that eminence from which its groves and walks may be discerned, his interest is yet further heightened by the most gladdening discoveries. *In Europe*, a fresh impulse to investigation has been experienced; and many a distinguished naturalist on the continent is emulous to obtain a wreath, like that which decorates the brow of him who lately towered aloft,

Quantum lenta solent inter viburna cupressi.

But now, alas! the mournful branches of the funeral tree are waving over him; yet, with the distinctive qualities of the same cypress, the memory of the immortal Sir James Edward Smith shall be evergreen and everduring, *semperpirens et sempiterna.*

Throughout the East, new stores are yet continually unfolded to us, and the vegetable treasures within *South America* appear in real value to transcend its precious mines.

And we rejoice also at beholding *in our happy land*, a scene at which the Horticulturist has cause to glory. We have already, as a people, enriched by numerous treatises and volumes, the Library that illustrates the natural products of the earth. Were I not surrounded at this moment, by the learning, genius and talent, which have been most conspicuous in accomplishing these toils, I would with pride repeat the names of many, and add to them, with pleasure, their appropriate epithets.

And learning, genius and talent are emulated by indefatigable industry and practised skill. The gardens that surround our city are abundant evidences of this truth.

Throughout the Union, enterprise is now directed to the culture of the most valuable plants.

Besides *sectional* objects, confined to particular regions of our country, there are others also claiming universal notice, which may be denominated *national.*

Of these, the *first*, by its importance, is *the cultivation of the vine.* The interesting facts and valuable suggestions on the subject, which you received from our President in his Inaugural Discourse,* deserve particular regard. Four years have intervened, since the Anniversary when he pronounced it, and his sentiments have been corroborated by indisputable proofs. Experiments have been successful, and the voices of our intelligent and enterprising Farmers and Horticulturists proclaim: 'The vine will flourish in our country, in various latitudes; and it yields to us an agreeable and valuable product.'—Yes! and native wines derived from it, and from the fruits of our orchards and our gardens, may be hailed by the philanthropist as the harbingers of a new era. The epocha may not be distant, when the draughts that are inebriating and destroying thousands of our population, shall be superseded by the use of milder and of salutary beverages.

A *second* object, that may be called national, is *the cultivation of the mulberry.* Distinguished among trees, as that from which the serick insect draws its nourishment, the mulberry *deserves* indeed particular attention. The American Institute of the City of New-York, anticipating the results to be derived from this invaluable plant, have received the aid and counsel of the learned President of the Linnean Society, and have entered upon a large and liberal plan of operation. We congratulate them, and sincerely trust, their labours may be remunerated by a rich abundance of the golden fleece. As an article of manufacture, silk has claimed the notice of our *general government.* Its House of Representatives have ordered, that the Secretary of the Treasury "cause to be prepared" a Manual on the subject, and a well digested Treatise§ was accordingly transmitted to them by the Secretary, during the period of their last session. It is before the publick; and its very favourable views of the growth and manufacture of silk in the United States, present a field of speculation, that is peculiarly attractive. The same policy, which has enlightened, and will no doubt stimulate by due rewards, the enterprising and industrious in this particular department, may soon become exten-

* An Inaugural Discourse, delivered before the New-York Horticultural Society, Aug. 31, 1824.

§ It is entitled "Letter from the Secretary of the Treasury, transmitting the information required by a resolution of the House of Representatives, of May 11, 1826, in relation to the Growth and Manufacture of silk, adapted to the different parts of the Union." *Octavo, Wash.* Gales & Seaton. 1828. pp. 220. Another Congressional Document on the subject is the "Letter from James Mease, transmitting a Treatise on the rearing of silk worms, by Mr De Hazzi of Munich, &c." *Wash.* Gales & Seaton, 1828. pp. 108.

ded, (veni dies!) to the whole range of Horticulture!

Had I not already dwelt so long upon the first of the particulars, that were proposed for your attention, I might here enlarge upon the *future prospects* of our favoured land. I might collect before you the anticipations, which are suggested, by its unparalleled advancement in the facilities of transportation and the extent of commerce:—its canals and rail-roads; the staple products of its soil; and its natural adaptation for the residence of the most enlightened of all people on our globe. Exhibiting, in their true colours, the glories that may one day reach, like the celestial bow, from our Atlantic to our Pacific confines, I might direct your contemplation to this graphick symbol of our great national destinies. And when all sounds of a disunion shall have passed away; when the rude storm of political animosity shall have been stilled; and when the last echo of the thunderings that arrest us in the South shall cease to roll;—as the prismatick arch, the token of an everlasting covenant of peace and union, shall shed its smiles upon our soil, I might depict the happiest of lands, that, like an aromatick "field which the Lord hath blest," shall send up to heaven, from the wide extent of its vast territories, the mingled perfumes of its cornu copiæ, sweet-scented fruits and fragrant flowers.

As we mingle our sympathies at this anniversary commemoration, we may with joy reflect upon the numerous, the varied, and the enlivening theme, by which Horticulture, with its stores of learning, and with its stimulus to industry, is calculated to engage the intellect.

II. And there is a *moral* halo that invests our subject. It can improve the *heart*.

As we behold the wonders that abound throughout the vegetable kingdom, we are lost in the interminable manifestations of the Supreme.

The *organization* that pervades it lifts up our hearts unto an Omniscient Creator. We cannot view the mechanism of a single plant without this sentiment. We see the several parts of which it is composed, arranged with a regard to its nutrition and its perpetuity, demonstrating a contrivance the result of the profoundest wisdom.

The *succession* that is discoverable in the annual circuit of our globe, directs our thoughts to Him, who is

> "———the life and light
> "Of all this wond'rous world we see."

Flowers, fruits, and culinary plants attain perfection, in a *series* that must command our gratitude. Not lavished with an indiscriminate profusion, at some one favoured crisis of the year, they are dispensed with an all-wise frugality‡ and "*yield their fruits every month.*"

Their *nature* also is adapted to the condition of mankind. Where sultry beams are shed upon the torrid zone, umbrageous groves extend their branches. Where the Polar skies are cheered by a short summer's reign, its vegetation is distinguished by a rapid‡ progress to maturity. Where manual labour is discouraged by oppressive heat, and where the mind is destitute of moral enterprise, abundant aliment is yielded to the lowliest cultivator of the soil. But in the *temperate* regions of the earth, where, unexposed to the depressing influence of an ungenial atmosphere, man walks abroad, delighting to exert his energies, *here* Nature calls forth talent, and awakens industry, by obstacles, which she allures them to surmount. As if anticipating the caprice of man, in countries, where the valley and the mountain each invite his residence, the products of the *torrid* zone are found within this vale; and on that towering summit is displayed to view a *Northern* vegetation.

In the distribution of the *odours* that are breathed around us, Nature seems to have been regulated by the same economy. Where happiness is found only in the refinement of the senses; where in luxurious repose, the Hindoo, with no zest for intellectual delights, seeks an innocent enjoyment in exhalations of sweet flowers; there the loveliest of plants, that are unrivalled in their perfume, dispense aroma in rich offerings to the ambient air.

> "Who has not heard of the vale of CASHMERE,
> "With its roses the *sweetest* that earth ever gave?"

Where, man, upon another continent, is seen degraded by the indulgence of the most loathsome appetites, and we are told that, by a remarkable peculiarity, which he possesses in common only with the inferior animals, the Hottentot experiences an emotion of delight, at the carrion-smell of what regales the hyaena and the vulture; in that region of the earth, (as if the poor savage were to be indulged in his caprice,) while Oriental perfumes are withheld, plants distinguished among us by their offensiveness, the *Stapelias*, in their variety, abound upon the soil, and fill the atmosphere with their putridity of savour.

Wherever man resides are found *nutritious berries*, which are agreeable to *all*. The barberry, the cramberry, and the dwarf mulberry, regale the distant Laplander; and besides these, the currant forms a

‡ In Lapland and at Olekminsk in Siberia, barley ripens in *seven or eight* weeks. See Georgi as quoted by Malte-Brun, *Syst. Geog.* B. XX. *Grain.*

wholesome food for the inhabitants of Greenland. Does the exhausted native of warm climates, parched with thirst, ask such plants as may be most refreshing to his enfeebled energies? Lo, Nature's bounty has supplied him with the melon, and the pine-apple, and all cooling fruits. And does the mariner, from the long use of salt provision, need some prompt remedy for its scorbutick influence? He may coast along the shores of the most distant regions in the North or South, and be furnished with the succory, the cresses, and the wild-sorrel, from Siberia to the remotest of the Pacifick isles. The Botanical Materia Medica is but an enlargement of this interesting thought.

But on a theme so vast I dare not venture further. It is replete with interest and instruction, whereso-ever we direct our eyes, from the most attenuated *lichen*, that is scarce discoverable on the rock, to the huge *baobab*, developing its mammoth trunk of eighty feet; and from the lowliest moss that peeps above the surface of the soil, to the towering palm-tree of the tropicks, almost two hundred feet in elevation. As the march of knowledge shall advance, and man be more minutely taught the mysteries of Nature, this wide field of Science, with an increased earnestness, shall be explored. What has been accomplished in the *heavens* by the rare genius of Laplace, bold, brilliant, and aspiring,—by some future Linne may be accomplished in regard to *earth*; and while the blue vault, and while the verdant landscape, are more and more distinctly uttering:

"The hand that made us is divine,"

the philosopher and Christian will continually be attracted by new themes of "wonder, love and praise."

It has been my object, not to venture far within this vast domain, but merely to suggest what may *awaken the resources* of a learned and intelligent assembly. A single pearl proclaims the boundless treasure of the deep; one gem is witness of exhaustless mines within the earth; and a few fitful rays from the bright canopy above may reveal to the imagination innumerable worlds of glory.

Under the influence of these thoughts, I would now say to the Members of the Society which I have the honour to address: While you participate in the intellectual and moral stores of Horticulture, you have a *two-fold* object, worthy of your tenderest solicitude.

1. It is for you *to collect the vegetable treasures of the Old Continents*, and enrich with them the glories of our favoured land.

The correspondence between Mr. Rush the Secretary of the Treasury, and our President, now stands upon our records. It invites us, literally, to regale upon the bounties of the wide world; to look abroad, wherever the banner of the country has been planted, by a Foreign Minister, a Consul, or a Diplomatick or Commmercial Agent; and to ask what we will of the productions of this ample realm. "Forest trees," I adopt the very words of Mr. Rush, "forest trees, useful for timber; grain; fruit trees; "vegetables for the table; esculent roots; in short, "plants of every description, whether used as food "or for purposes connected with any of the useful "arts—all will fall within the scope of the plan pro-"posed."¶

Such cheering smiles the General Government bestows upon that field which it is our privilege to occupy. They thus emulate the policy of other nations; and in accordance with this policy, were proper publick grounds provided, either in each State, or in the four great sections of the Union, we doubt not, that our nation would rejoice at the benign results. We have a soil, which like the heritage of ancient Israel, is "the glory of all lands." Within the limits of our four and twenty States may be discovered an appropriate residence, for almost every plant in all the *four and twenty Classes* of the Botanist.

And to the Members of the New York Horticultural Society are offered powerful inducements, to be the channel of our nation's intercourse with other countries, in regard to plants. In the Mythology of Ancient Rome it was ingeniously fabled, that Pomona could not be induced to shed a smile on any of her suitors, until her heart was touched by the devout breathings of Vertumnus; and in the tenderest of bonds were joined the god of merchandize and the divinity of gardens. The ingenious fable is instructive; for our Art

——————"thrives most
"Where Commerce has enriched the busy coast;
"He catches *all improvements* in his flight,
"Spreads *foreign* wonders in his country's sight."

2. Another object, far more interesting, invites your care. It is *the preservation and the culture of plants indigenous to our soil.*

They are confided to your guardianship. But look around you; see them perishing in multitudes beneath the ploughshare and the axe. Certain species and varieties, which in old time adorned the verdant mantle of the earth, are to be found no longer; but their memorial, transmitted to us in

¶ The correspondence between Mr. Rush and Dr. Hosack has been published in the *New-York Farmer and Horticultural Repository*, Vol. I. Art. 34. The quoted passage is in Mr. Rush's Letter, dated May 15, 1827.

floetz rocks, is a demonstration of their original existence. And shall it ever be recorded of any valuable varieties of *our native* plants, *their sweetness has expired on "the desert air?"* Your active measures, I doubt not, will soon eloquently teach, that in the garden which you are preparing to establish, will be collected from our woodlands and our fields, a beauteous and bright floral galaxy.

And here again I would refer to our President's Discourse, in which is clearly and minutely stated a well ordered plan, both practical and scientifick, discovering to us large views, which it is noble to possess; and could we but effect their consummation, the reality would be magnificent.

We might then call together, (and exult as we contemplated,) the lovely families of our rural offspring. We might find within this native circle, when possessed of suitable advantages for their *improvement*, the rarest and most estimable qualities, to please and benefit mankind. Among the changes that are exhibited upon the surface of the globe, none are more worthy of remark, than the *transmutations* which are effected in the vegetable tribes.—Our celery is but the parsley, or smallage, in an advanced state of cultivation. The Cauliflower and the Broccoli have issued from the humblest plants. When in its natural condition, the Asparagus can scarce be recognised as that, which when domesticated is a table luxury. And the potatoe, which is the sustenance of millions of our race, has been generally cultivated but a hundred years,—and the most useful of all esculents, it is insignificant and uninviting in its natural state. And can we for a moment think, the progress of discovery has been arrested? Are there no other contributions which the earth may yield, to the existence and enjoyments of our race? At this moment, the botanick missionaries of the Old Continent are engaged in traversing our territories, that they may answer the inquiry. Let us emulate their zeal; and let us not value at a lower estimate than others, those rare gifts which the great God of nature hath put into our hands. Let us *co-operate* in the attainment of our interesting purpose; let us tie together our rods in the manner of the Roman *fasces*, and this union cannot fail to give us permanence and power.

Replenished with indigenous attractions, our proposed garden will be esteemed abroad "a garden of delights." The hand of many a distinguished foreigner will soon beckon for an interchange of precious plants; and by the winds, that swell the sails of our commerce, will be wafted to us the best offerings of the remotest realms. We may even rival in celebrity the paradises at Copenhagen, Kew and Malmaison; at Schonbrun and Berlin. Let us then appreciate our natural inheritance. It is *our bald-eagle* that in full view of Niagara's sublimity, soars beyond the flight of his companions,

> ——"sailing with supreme dominion,
> "Through the azure deep of air"

The forest hears the minstrelsy of the whole feathered throng, in the delightful musick of a bird, that in its native beauty and perfection is our own*. And, as the youthful Otaheitan, who "sprang forward at the unexpected sight of a banana tree, in the *Jardin des Plantes*, and embraced it, while his eyes were bathed in tears;" could *we*, within the confines of some distant land, but scent the gale that bore upon its wings the perfume of our Magnolias, as we imbibed the fragrant offering, with the same generous enthusiasm we also might exclaim: "Ah! tree of *my country!*"

Let us appreciate *all* our natural inheritance! Let us persevere to the full attainment of the objects which we contemplate. *We know that we are able, and we will succeed;*

> ——possunt quiâ posse videntur.

Then by science and by industry we will contribute to the stores of human happiness; and we will take the lead, where to follow in our footsteps will be honourable.

Our ardent, able and efficient President, our learned and indefatigable Lecturer and Counsellor, and our classical and accomplished Corresponding Secretary† have, in turn, been chosen to animate you, when convened at the former celebrations of this festival. I was unmindful of myself, in my devotion to my subject, or I should not have consented to follow in *their* path. But, though I "attain not unto the first three," I account it a distinction for which I tender you acknowledgments, that I have been deemed worthy to be named and numbered with them in our cherished cause.

It is a benevolent, it is a noble cause. It exerts a salutary, intellectual and moral influence. It has rich resources for the head; and it has rich resources for the heart. While it instructs and edifies; ennobles and exalts; it awakens feelings of philanthropy. Its motto is: "GOOD WILL TO MAN." It inscribes above its portal, what was written at the entrance of that memorable garden, into which the very Patriarch of Botany, Linne himself allured his followers: "ENTER; FOR A GOD IS HERE." Like that holy faith which we profess, it calls up sympathies, that would excite every one within the extensive sphere of its operation, to partake of its innumerable enjoyments and its manifold rewards.

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* Mocking Bird.

† The Society has listened, successively, to *Dr. Hosack*, *Dr. Mitchill*, and *Mr. Carter*.

In my enthusiasm for my subject, I now *experience* this sentiment which I describe!

Could I address myself to all the ingenuous, and liberal aad enlightened among my friends, adopting the eulogium pronounced on the study of Polite Literature by the great orator of Rome, I would thus paraphrase it with a particular reference to our subject. "Were it not as abundant in resources as I "have alleged, and were it to be pursued merely for "the pleasure which flows from it, you will acknowl- "edge, I doubt not, that it is a mental recreation, "the most liberal and polite. For other studies are "not appropriate at all times, to all ages, and in "every place; but this has nourishment for us while "we are young, and pleasing joys when we are old. "In prosperity, it is an ornament; and in adversity, "a refuge and a solace. It delights us when at "home, and it is no impediment abroad. Whether "we go forth to meditate at eventide, or are occu- "pied in journeying from place to place, or are "wandering through the country in our rural recrea- "tions, it is an agreeable companion and a constant "friend. If any are themselves unable to pursue the "subject, or want a relish for its charms, yet when "they see it blooming about *others*, they should not "withhold the tribute of their commendation."*

Could I appeal to such as are entrusted with our *Literary Institutions*, I would say: Instil into the minds of all your youthful charge a love of nature. Teach them.

> "To mark, in every magick change of scene,
> The grand diversities of nature's laws,
> Yet find in all the ever present God!"

You will thus give them an instructive friend, where they might otherwise be solitary. You will supply them with a volume, in which with raptnre,

> ———"they may read, and read,
> And read again, and still find something new,
> Something to please, and something to instruct."

Could I accost *the amiable portion of our race*, whose attributes are symbolized by the delights of Flora, I might maintain the justice and propriety, with which a certain Oriental language† uses the same word to designate both flowers and the fair.—Every estimable virtue that adorns the sex, has its type in these exquisite manifestations of the Benignant. And they are adapted, not only for the personal embellishment, but for the intellectual and moral discipline of those, to whom I would commend the contemplation of their loveliness. Their province is not only to afford the senses a rich feast, to fill with their sweet perfumes the air we breathe, and to allure the eye by their conformations, and by their tints of color; but by sympathies, the most refined, and pure, and amiable, to exalt the soul.

> "The spleen is seldom found where Flora reigns,
> The low'ring eye, the petulence, the frown,
> And sullen sadness, that o'ershade, distort,
> And mar the face of beauty, when no cause
> For such immeasurable woe appears:
> These Flora banishes, and gives the fair
> Sweet smiles, and bloom less transient than her own."*

Could I move *the authorities of our city* in the cause which I espouse, our public squares and parks should become pleasure-grounds, disposed and decorated to regale our citizens. Within their walks should be no fumes of the intoxicating deity, but the pervading pure, and salutary influence of Nature's God.

And in the suburbs of our Metropolis should be a Cemetry; it should be "a garden and in" the midst of "it a sepulchre," where the ashes of the departed might *repose in peace*; where children might be literally gathered to their fathers; and where the vernal buds, the summer flowers, and the sere leaves of autumn might teach lessons of morality, and speak of the resurrection and the life to come.

Could my voice reach the *Legislative Councils of the land*, I would say: Appropriate to those who have fulfilled their trnsts, and are withdrawing from the paths of public life—in the interesting manner of the heroic age, appropriate a *temenos*; a portion of that soil, which in their hearts is consecrated as their country and their "sweet home." It will refresh their spirits, when they look around them and reflect: this is the nation's gift. There is a peacefulness and a serenity in rural scenes, that have at all times had a charm for the philosopher and patriot. That hand, which held the destinies of ancient Rome, when it had guided and had saved the nation, held the plough upon *the farm of Cincinnatus*. In the hearts of all his countrymen is the memorial of him, who loved *Mount Vernon's calm retreat*. *The shades of Monticello* have been forever consecrated. And at this moment, the beloved Lafayette is seen cultivating his *La Grange*; and our own Jay, retired to the sanctuary of his vilie, now calmly meditates upon his rest above.

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* Cicero, *Orat. pro Archia Poeta*, Sect. IV.

† The Malay, the most agreeable throughout the East. Like French in Europe, it is a very general medium of thought; and its characteristicks entitle it to be distinguished, as *the Italian of the Orientals*.

* I would here name particularly the *Sylva Florifera by Henry Philips*, as deserving a place in every Lady's Library. No one can rise from the perusal of it without amiable feelings.

Were it given to me, on this festival, to distribute garlands, I would thus place them upon the brows of our youth; I would supply them also as a decoration for the fair; I would fill our country and our city with their fragrance and their verdure; and I would present them as a reward of public services.

Were there some happy realm, where might be realized the joys which, inspiration teaches, were the first blessedness of man, I would delight to resort thither with the beloved circle of my friends, that in the tranquillity of the terrestrial Eden, we might live in rural happiness and die in peace. But, with the learned, we shall in vain seek the enviable spot.—One tells us, it was in the confines of the ancient Armenia; another points us for its bliss to the lovely valley of Cashmere; and another teaches, that in Persia were its gladdening groves. But it is no longer upon earth. Like good men of old, *it has been translated.* Yet, I would indulge, in reference to it the kindest sympathies toward my associates; I would embody my best feelings in a devout ejaculation: that, when our studies and our cares and toils shall have ceased here below; when, like the grass that withereth, we shall have mingled with the dust; we may hereafter meet within the bowers, and be regaled with the enrapturing transports of that *Eden in the skies.*

ART. 139.—*Agricultural Improvement.*

[The Jefferson Agricultural Society held their annual exhibition on the 25th Sept. inst. The report of the committee, an extract of which we subjoin, furnishes another testimony of the salutary influence of these institutions, upon the agricultural community. This influence will particularly be felt in those sections of our country, where the population is recent and widely scattered; and where the improvements which are common in thickly settled districts are introduced, with a very slow and gradual progress. They have the happiest effect in accelerating the march of refinement, in diffusing information, and in exciting emulation among the members, each of whom feels an individual interest in promoting objects of general utility. It is gratifying to perceive from this report, the advances that have been made in that distant section of our state, and one of comparatively recent settlement, both in Agriculture and in Horticulture.—*Ed.*]

"Before proceeding to the more immediate duty of the committee, they beg leave to trespass a few moments on the patience of the Society, while they offer a few remarks relative to what they have seen and learned, during their tour of inspection.

The committee are composed of some of the very earliest inhabitants of the county. A few short years will carry their recollections back to the period, when the whole district was covered with one uninterrupted forest, traversed only by the savage, or the beasts of the chace, that alike were contending with nature, and with each other for sustenance, to satisfy the cravings of hunger. They now see the same district filled with a teeming population; villages have been planted, and society in its various forms organized, and has already attained to a consistency, alike respectable and permanent. This quick transition, from boundless forests to cultivated fields and cheerful habitations, has somewhat the effect of enchantment.

The committee have seen with regret, that the great staple of the country, Wheat, has generally disappointed the reasonable hopes of the farmer. In a few instances only, have the ravages of the winter and the blight left any thing to remunerate the toils of the husbandman. On the other hand, grass has been most abundant, as have also rye, oats, and potatoes; and wherever the great fall of rain has not prevented the destruction of seeds, the corn will yield an abundant harvest.

It is known to all, that apples are grown in good perfection, where attention is paid to their culture; and the committee have witnessed with pleasure that the finer and more delicate fruits are becoming more and more an object of cultivation. They have seen plums in great perfection, and in considerable variety; peaches are found in almost every part of the county, and the delicate nectarine has come to maturity near the waters of the lake. In several places, grapes were found, and the committee cannot forbear to notice more particularly some very fine specimens. which they saw in considerable quantities, in the extensive and elegant garden of Mr. Kip, near Le Raysville, where also can be had a great variety of useful and ornamental trees and shrubs, sufficient to satisfy the wants of the county.

Abounding as our county does in stone of the best quality for lime and for building, and in almost every other material, at a price unexampled for cheapness, the committee have seen with surprise, that in many places the new dwellings are constructed of wood, and in a majority of such cases, in situations where stone is the most accesible, a wooden structure is absolutely reared on the top of a stone quarry.—This ought not to be so; stone is the cheapest material, and no one can question how superior it is in point of health and comfort. It is raised with less expense, and besides, it is so much more durable and secure from destruction by fire. Such practice is treating with disregard the bounty of Providence,

the wisdom of all preceding ages, and an act of injustice to our posterity.

Why is it that our enterprising manufacturers are so much wiser than some of our farmers in this respect? You see them substitute for wood the more durable articles of iron and stone, wherever they can be applied. Look at that noble structure lately built at this place, for the manufacture of cotton, and indeed all the other erections for similar purposes, and you will find that the wise forecast of their proprietors, have rejected wood as alike perishable and frail. It cannot, however, be denied that many of our farmers have chosen the path of wisdom, and have lodged themselves securely in houses of stone; and it is equally the pride and the boast of our county, that our civil architecture is generally chaste and durable, and in some instances more particularl in that substantial and commodious private dwelling lately erected at Le ta sville, it aspires not only to elegance, but to grandeur, and is not, perhaps for comfort and convenience, surpassed in the wide extent of our state.

The committee have observed with great pleasure, the laudable practice that is now beginning to prevail, of planting near buildings and by the way side, useful and ornamental trees. It is a practice that cannot be too much commended; and the committee were involuntarily led to note the contrast between the neat and cleanly farm yard, well protected by a good fence, and studded with fruit and forest trees, and that of the careless and slovenly husbandman, whose naked farm yard was covered with every offensive weed, and open to the intrusion of his own and his neighbor's cattle, and whose manure, the accumulated mass of years, seemed destined rather to obstruct the highway, than to enrich his impoverished land.

It has been wisely said, that ignorance is not the parent of devotion. The sentiment will hold equally good in respect to the interesting subject, that now more immediately engages our attention; for surely as all ends are the natural and inevitable results of their appropriate and proper means, it is of the greatest importance to be able to choose amongst many ways, the best. Let the farmer then make himself acquainted with, and appropriate to his own use, the wisdom and experience of others; for if we can learn to avoid error by observing the wrong conclusions, to which it inevitably tends, it is doubly important that we find out the good way and walk in it."

[While on the subject, we cannot but express our surprise and regret that the Agricultural Society of the county of New-York, should so long have suspended its labors, if it is not actually dissolved; and that too, not from any want of patronage from our citizens, but, if we are credibly informed, with a considerable amount of funds in its treasury, and a provision for a further supply from the state. That society was distinguished by its short career of usefulness and importance to our agricultural interterest, and by its instrumentality, the attention of our citizens was directed to the introduction of a fine breed of horses and cattle, besides many other products of the most valuable kinds, which were diplayed at their annual exhibitions. It is true that our county partakes of the character of the city, and cannot strictly be called agricultural; and a county society is not much required for domestic purposes. But such an institution should be established for general views, and to represent and cherish the interests of every county in the State. Our commerce renders accessible to us the improvements of the whole world: and by means of it, our city society might render the most important aid to the local institutions, by turning its attention to the introduction from abroad, of the best breeds of cattle, and the most improved implements and materials of agriculture. Add to this, the sources of useful information which they have in their power, by means of foreign correspondence, and which are not within the scope of the county societies, render the establishment of an institution in this city, a matter of the highest necessity.

No period would be more favorable for the operations of this Society than the present, and we hope soon to see it revived, with its former character and vigor.—*Ed,*]

ART. 140.—*Fattening Swine.*

According to the opinion of the Rev. Mr. Elliot, the best time in the year to shut up hogs to fatten them, is the month of August. I rather prefer the month of September, when it may be depended upon, that they will not suffer at all by the heat in their confinement; and there will be time enough to make them fat, before the weather becomes extremely cold.

He that attempts to fatten his hogs in winter will be a loser; for it has been found by long experience, that they do not gain in their flesh near so fast in a frosty, as in a temperate season. I therefore take care to get them fit for the knife by the beginning or middle of December, and I should choose to kill them still earlier, were it not for the advantage of keeping the lean part of the pork for some time without salting; as it most commonly may be done by exposing it to frost, in the coolest part of a house.

But a very important question is, what food and

management is best in fattening swine? Peas answer well, when the price of them is low. But I am constrained to give the preference to Indian corn.—Let them be fed in September with green ears from the field. There is nothing they will devour more greedily than this corn, and even the cobs with it.

In Indian harvest, the unripe ears should be picked out, and given to the hogs that are fatting, without delay; or as fast as they can eat them; for it will do them four times as much good in this state, as it will after it is dried, it being difficult to dry it, without its turning mouldy or rotten; so that they will scarcely eat any of it in this state, unless they be kept shorter of food than fatting hogs should be.

After the unripe corn is used, that which is ripened must be given them.

If it be thought most convenient to feed them with corn of the preceeding year, it should not be given them without soaking, or boiling, or grinding it into meal. For they will not perfectly digest much of the hard kernels; it being often too hard for their teeth. It has been thought by good judges, that the corn will be at least a sixth part more advantageous to the swine for soaking it in water. But there is, if I mistake not, still more advantage in grinding it.—What new corn is given them, may be in ears, as it is not hardened enough for grinding. I know of nothing that will fatten hogs faster than a dough of meal and water. But as this is expensive food, the dough may be mixed with boiled potatoes, or boiled carrots. They eat these mixtures as well as dough by itself; and it appears to make no material difference in their fattening. In this mixture, barley meal will answer instead of Indian; which should be attended to in our more northern parts, where two bushels of barley may be as easily raised, as one of Indian corn. Both kinds of meal I have found to be a good mixture with boiled potatoes; but it should by all means be a little salted to give it a good relish.

While hogs are fatting, little or none of the wash from the kitchen should be given them. Their drink should be fair water, which they relish better than any other drink, and of which they will drink a good deal, when they are fed only on corn, or stiff dough.

To prevent measles and other disorders in hogs, while they are fatting, and to increase their health and appetite, a dose or two of brimstone, or antimony, given them in their dough, is useful, and should not be neglected.

Some change of food may be advisable, in every stage of their existence, as it always seems to increase their appetite. But while they are fatting, laxative food in general should be avoided, as these animals are seldom known to suffer by costiveness, especially when they are full fed, but often from the contrary disorder. If they chance to be costive, a littlerye will help them.

In feeding, steady care should be taken that not one meal should be missed, nor mistimed, and their water should never be forgotten. They should always have as much food as they will eat up clean; but never more than that quantity, lest they defile it and it be wasted. A little at a time and often, is a good rule.

If their skins be scurvy, or inclined to manginess, a little oil poured upon their backs, will cause it to come off. And some say a small mess of rye now and then, as a change in their food, is good against these and other disorders.

If the issues in the fore legs should chance to get stopped, every attempt to fatten them will be in vain. These, therefore, should be watched; and if found to be stopped, they should be rubbed open with a corn cob.

Rubbing and currying their hides very frequently, is of advantage to keep up perspiration. It is grateful to the animals, as well as conducive to their health and growth. A proper scrubbing post in the middle of their pen will not be amiss. And during the whole time of their fatting, they should have plenty of litter. They will lie the more dry and warm and it will be more than paid for, by the increase of good manure.

When hogs are killed, a single one should not be left to live alone in a pen. He will be apt to pine too much after his former companions. And in cold weather he will suffer for want of lodging so warm as he has been accustomed to do.

The fat of pork should be plentifully salted with the best and strongest clean salt. It will take three pecks for a barrel. The pork should be kept continually under pickle: for if it be exposed ever so little to the air, it will become rusty and unpalatable.

Boiled or steamed clover hay will serve to keep hogs during winter, but the addition of potatoes or carrots, boiled or steamed with the hay will be an improvement.

Mr. Young directs soiling swine in a yard in preference to feeding them on clover in the field during the summer. But Judge Peters, of Pennsylvania, says 'In summer hogs chiefly run on clover. Swine feeding on clover in the fields will thrive wonderfully when those (confined or not) fed on cut clover will fall away.' The same gentleman asserts that hogs while fatting, should constantly have some dry rotten wood, kept in the pen, which they will eat occasionally, and it proves very beneficial to them. It is also declared, as well by that gentleman as other writers, that food

when soured by a proper fermentation is much the best for fattening swine, and that one gallon of sour wash will go as far as two of sweet for that purpose. Mr. Young says, that the best method of feeding all kinds of grain to hogs is to grind it to meal, and mix it with water in cisterns for that purpose, at the rate of five bushels of meal to a hundred gallons of water.—*Deane.*

ART. 141.—*Recent Publications on Horticulture.*

The New American Gardener, containing practical directions on the culture of Fruits and Vegetables, by THOS. G. FESSENDEN, &c. 1828.

Mr. Fessenden, to whom the agricultural world is largely indebted for the talent and industry with which the New-England Farmer is conducted, has lately published a small volume, addressed to the Gardeners and Farmers of this country, under the title of "The New American Gardener." In this small compass is brought together the actual amount of information possessed upon subjects relating to Horticultural science, which are of most importance to our countrymen. It is professedly a compilation, and every source of knowledge has been industriously consulted; but it is obvious, that to select with proper discrimination, an author must possess a practical familiarity with his subject to enable him to decide upon the degree of authority to which his respective informants are entitled; and no man perhaps is better qualified for such a task than Mr. Fessenden. As a manual of practice, accurate and intelligible in its style, precise and ample in its directions for the choice and culture of the respective subjects treated of, and particularly adapted to the northern section of our Union, we hope it will find its way into the hands of every Gardener and Farmer. It is necessary that this useful class of our countrymen should be often reminded to make the most of their time and means, to attend only to those kinds of products which will compensate them for the time and labor bestowed on them. The ground which is not cultivated will be infested with weeds which will exhaust the soil as much as the most luxuriant crop, and there are many inferior kinds of grain, fruits or vegetables, which require the same space, the same expense of toil and money, and the same time, to bring to maturity, as those which will produce a profitable return. The judicious gardener or farmer never puts a seed or root into the ground, without first considering whether it is the best of its kind, or if a better might not be procured. Books which contain the advice of experienced men, are indispensable, to direct the cultivator what sorts he ought to prefer, and how he must proceed to make the most of his means. Such a work is Mr. Fessenden's Gardener; and we are gratified to perceive that it is estimated as it deserves to be, a second edition being already published.

MISCELLANY.

☞The New-York Statesman of the 4th inst. notices a very important invention for spinning flax and hemp, by Doctor Boll and Mr. Dyer, of New England. It is said to be constructed on an entirely new principle, and to produce about the same quantity as the throstle spindles in the cotton manufacture. The whole formation of the thread from dressed flax is completed at one operation.—The material laid on the machine, is wound upon the spools ready for the loom, without the intervention of any assistance; the whole being effected by the rotatory motion communicated from *drums.* Indeed, all the motions of the instrument are of a circular kind.

The intelligent editors of the Statesman add the further remarks, "That so far as our observation or knowledge extends, this invention is entirely original, and nothing of the kind exists in the workshops of the United States or Europe, where fabrics from flax are entirely wrought by hand. The manufactures of linens will now be placed upon the same ground and enjoy the same facilities as cottons. It has been estimated, that upon moderate calculations *two millions of dollars* may be saved annually to this country, by the reduced expenses of linen fabrics, effected by this invention. If it be not introduced abroad, and foreign prices thus diminished, the products of our own looms will supply our markets and prevent importations from maintaining competition. Such is our impression of the importance of this machine.—Those who are incredulous on the subject, may have their doubts removed by an examination of specimens of the thread at this office, or by inspecting the machine at the corner of Pine and Water-streets."—*Amer. Farmer.*

Cochineal insect introduced into Europe.—It appears that an experiment lately tried in Spain, and some parts of the Mediterranean, to introduce the cochineal insect, promises to be attended with the desired result in some of the provinces of Spain, at Gibraltar, and at Malta. The Indian fig is of a natural growth under the climate of those countries, and being the only food of the insect in question, originally suggested the idea of its importation. It has been ascertained, after the indefatigable researches of some celebrated naturalists, that the powers of

fecundity of the female cochineal insect are so great as to enable it to give birth, in the very short course of its natural existence, to no less a number than 632,727. Its transportation into Europe may, in a short time become a source of important trade to those parts where circumstances of climate and food will enable it to thrive.

Vinegar from the refuse of bee-hives.—When honey is extracted from the combs, by means of pressure, take the whole mass, break and separate it, and into each tub, or vessel, put one part of combs and two of water; place them in the sun, or in a warm place, and cover them with cloths. Fermentation takes place in a few days, and continues from eight to twelve days, according to the higher or lower temperature of the situation in which the operation is carried on. During the fermentation, stir the matter from time to time, and press it down with the hands, that it may be perfectly soaked. When the fermentation is over, put the matter to drain upon sieves or strainers. At the bottom of the vessels, will be found a yellow liquor, which must be thrown away, because it would soon contract a disagreeable smell, which it would communicate to the vinegar. Then wash the tubs, put into them the water separated from the other matter; it immediately begins to turn sour; when the tubs must be again covered with cloths, and kept moderately warm. A pellicle, or skin, is formed on their surface, beneath which the vinegar acquires strength; in a month's time it begins to be sharp; it must be left standing a little longer, and then put into a cask, of which the bung hole is left open. It may then be used like any other vinegar.

Observation. To strengthen vinegar, suffer it to be repeatedly frozen, and separate the upper cake of ice, or water from it.

All vinegars owe their principal strength to the acetic acid they contain; but the vinegar of wine contains also tartar, a small portion of the malic acid, alcohol, and coloring matter; that of cider and perry contains merely the malic acid, little or no alcohol, and a yellowish colouring matter.

Common method of making Vinegar.—To every gallon of water put a pound of coarse Lisbon Sugar; let the mixture be boiled, and skimmed as long as any scum arises. Then let it be poured into proper vessels; and when it is as cool as beer, when worked, let a warm toast, rubbed over with yeast, be put to it. Let it work about twenty-four hours, and then put it into an iron-hooped cask, fixed either near a constant fire, or where the summer sun shines the greater part of the day; in this situation it should not be closely stopped up; but a tile, or something similar, should be laid on the bung hole, to keep out the dust and insects. At the end of about three months (something less) it will be clear, and fit for use, and may be bottled off. The longer it is kept, after it is bottled, the better it will be. If the vessel containing the liquor is to be exposed to the sun's heat, the best time to begin making it, is in the month of April.

Successful method of curing Butter, as practised in Scotland.

It is well known, that Butter as it is generally cured, does not keep for any length of time, without spoiling or becoming rancid. The Butter with which the metropolis is supplied, may be seen at every Cheese-mongers, in the greatest *variety of quality and colour;* and it is too often the case, that even the *worst* butter, is compounded with better sorts, in order to procure a sale. These practices are detestable, and should be discountenanced by the legislature. Indeed no Butter should be permitted to be sold, but such as is of the best quality when fresh, and well cured when salted: as there is hardly any article more capable of exciting disgust than bad Butter.

But to obtain a reform in this matter, it is necessary to commence with the practices of the dairy; and the following process is recommended as the best at present known: Reduce separately to fine powder in a dry mortar, pounds of the best, or whitest Salt; 1 pound of Salt-petre; and 1 pound of Lump Sugar. Sift these ingredients, one above another on two sheets of paper joined together; and then mix them well with the hands, or with a spatula. Now preserve the whole in a covered jar placed in a dry situation. When required to be used, 1 ounce of this composition is to be proportioned to every pound of Butter, and the whole is to be well worked into the Mass. The Butter is to be packed in casks, &c. in the usual way.

Observations.--The above method is practised in many parts of Scotland: & is found to preserve the butter much better, than by using common salt alone. If butter made at one time be divided into two parts, and one be salted in the common way, whilst the mixture above mentioned is worked into the other, the difference in the quality of the two, will be found to be beyond all conception.

The butter cured with this mixture appears of a rich marrowy consistence and fine colour, and never acquires a brittle hardness, nor tastes salt; the

ther will be comparatively hard and brittle, approaching more nearly to the appearance of tallow, and is much salter to the taste. Butter cured by the above composition has been kept three years, and was as sweet as at first; but it must be noted, that butter thus cured requires to stand at least three weeks or a month befor it is used. If it be sooner opened, the salts are not sufficiently blended with it, and sometimes the coolness of the nitre will then be perceived, which totally disappears afterwards.

One more observation on the preservation of butter is necessary. It is universally allowed that cleanliness is indispensable, but it is not generally suspected, that butter from being made in vessels or troughs lined with lead, or in glazed earthenware pans (which glaze is principally composed of lead) is too apt to be contaminated by particles of that deleterious metal. If the butter is in the least degree rancid, this can hardly fail to take place, and it cannot be doubted, that during the decomposition of the salts, the glazing is acted on. It is better therefore, to use tinned vessels for mixing the preservative with the butter, and to pack it either in wooden vessels, or in jars of the Vauxhall ware, which, being vitrified throughout, do not require an inside glazing.

Spade Husbandry.—It is thought by British Agricultural writers that the spade will eventually take the place of the plough in Great Britain, in tilling the earth. The Flemings, by this mode of tilling, have acquired for their country, the flattering appellation of "the Garden of Europe." Sir John Sinclair, formerly President of the Board of Agriculturse, attracted by the encomiums which he had heard on the Flemish System, visited that country. His expectations were more than realized. In a letter to the Editor of the Brussels Observer, he remarked—"I shall never forget what I have seen in this country! a picture of the most ravishing description to a lover of agriculture; a soil become rich through the effect of cultivation, and consequently by the skill of an industrious people, who receive the due reward of their admirable exertion in the products which they obtain.

About fifty years previous to the period of Sir John Sinclair's visit, Flanders was almost a moving sand. With a climate not more favourable than that of England, land has since quadrupled in value; fallows have been entirely banished; the produce in nine years is generally on an average, four quarters and a half, and oats eleven and one fourth quarter; and the borders of the fields are planted with trees, in such numbers, that by their sale, the proprietors acquire in forty years, a sum of money equal to the value of the soil. The cause of this wonderful improvement in fertility is chiefly attributed, by Vanderstracten, author of a treatise on Flemish husbandry, to extirpating noxious plants and roots every six or every three years, by *digging all the land on their respective farms*, by this operation they revert to the surface a stratum of fresh soil, which, for three, or for six years, has been absorbing the salts of manure to the bottom of the roots.

In the United States, where the low price of land, occasioned by its abundance, renders cultivation somewhat different from what it is in countries where land is limited and dear, it may be thought that the spade system would not be profitable. But when we consider the trouble attending the management of a large farm, and calculate the original cost at the expense of supporting the number of cattle necessary for tillage, and removing the fruits of the earth to the barn, together with the capital sunk in implements of husbandry, we shall probably see cause to think otherwise. At all events it seems worthy of a trial.—*Middlesex Gaz.*

Preservation of Saur-Kraut.—Every Russian family, from that of the boor to the nobleman, lays in its stock of cabbage to make Saur-Kraut, about the month of October, before the setting in of the winter frost. It is prepared in the following manner:—They take a large strong wooden vessel, or cask, with which every family is furnished, resembling the salt-beef cask of the Scotch farmers, and capable of containing as much as is sufficient for the winters's consumption of the family. They then gradually break down or chop the cabbage, deprived entirely of the loose outside green leaves,) into very small pieces, beginning with one or two cabbages at the bottom of the cask, and adding others at intervals, pressing and rubbing them by means of a wooden spade, against the sides of the cask, until the vessel is nearly full. They then place a heavy weight upon the top of it, and allow it to stand near to the peach stove, or any other warm place, for four or five days. By this time it will have undergone fermentation, and be ready for use. Whilst the cabbage is passing through the process of fermentation, a very disagreeable fetid, acid smell is exhaled from it; and this is strongly perceptible to the olfactory nerves of a person passing near the house, in which the preparations of the Saur-Kraut is going on. They now remove the cask to a cool situation, and keep it always covered up. Aniseseeds, which are strewed among the layers of the cabbage during its preparation, communicate a peculiar flavour to the Saur Kraut at an after period.

In the boiling of the Saur-Kraut, and preparation of it for the table, two hours are the least period which they allow it to be on the fire. It forms an excellent, nutritious, and antiscorbutic food for winter use. For the greater part of the year, this article, in one form or another, supplies a daily dish to the table of the Russian peasant. It may be made use of as a separate dish by itself, made into soup, or it may be eaten with boiled animal food.

Preservation of Eggs from putrefaction.—To transport eggs in a fresh state from one country to another, varnish, by dipping them in a solution of Gum Arabic in water; and then imbed them in powdered charcoal. The Gum Arabic answers the purpose of a varnish for eggs much better than any resinous gum, as it can be easily removed by washing in either warm or cold water; besides, it is much cheaper. Eggs preserved in this manner, will keep for many years, as the bed of charcoal, from its porous nature, is a non-conductor of heat, and consequently maintains around the eggs an uniform temperature; preventing them from suffering by alternations of heat and cold, when they are removed from one climate to another.

Observation. This method is infinitely preferable to that of greasing them, for when the grease becomes rancid, it hastens or promotes putrefaction of the animal matter in the egg.

Mammoth Melons.—Two water melons were weighed a few days ago, on their vine, in the garden of Mr. Gale, in Waltham, Mass. which were 46 and 45 pounds. A short time afterwards, when picked, they were found to have considerably increased in size. Both together weighed 103 pounds. This is a great weight for the product of a single vine. The seed was obtained from the great melon exhibited at the Brighton Fair in 1821, which weighed 47 pounds. Fifteen dollars were offered and refused for the two. They were to be exhibited at several of the agricultural meetings in the vicinity.

Col. Daniel Brooks, of Lincoln, measured one of his water melon vines, which was 475 feet in length, including branches. The average weight of three melons, produced on this vine, was 21 pounds, besides several smaller ones, making in all 104 pounds.

Hot water, applied to the roots of trees will resuscitate them if they be worm eaten; many trees in a decaying condition have been saved by scalding them in this way. Pour the water round the tree slowly, and be careful that it penetrates the roots. Hot water will also be found extremely beneficial in radish and other vegetable beds. Scald the earth before sowing the seeds, by which means you will destroy the larvæ of the insects, which are apt to be very plenty in rich soil.

Liming Seed Wheat.—A respectable correspondent informs us, that unslacked lime has been found to answer an excellent purpose, in preparing wheat for seed. The gentleman states that he put about four or five pounds of quick lime into a sufficient quantity of water to soak one bushel of wheat, which he sowed the last spring, then added the wheat, and permitted it to remain about twelve hours. The lime, by slacking, raised the temperature of the water to blood heat, the wheat became soft and apparently par-boiled. On sowing it, however, it sprouted much sooner than usual, flourished remarkably, and produced an excellent crop, entirely free from any appearance of smut. The above is probably the least expensive, and most efficacious mode of preparing wheat for seed, that has yet been discovered.—*Amer. Farmer.*

At the late show of Mannfactures at W. Newbury, there was an exhibition of peculiar and very novel interest by Mr. Enoch Boynton, of Newbury; who produced specimens of Silk of his own manufacture, together with the substance of the material in the various stages of its growth and preparation. Mr. Boynton, who has been indefatigable in his present undertaking, states that he is now rearing 1000 mulberry trees, which are just coming forward, and expresses the most entire confidence in the result of his experiment.

Pears.—In Salem, Mass. is a pear tree, which was planted about 30 years ago, and has never been grafted or inoculated, yet yields two sorts of fruit, unlike in size, shape and appearance, growing on the same branches, and from blossoms of the same bunch. The tree sprung from the seed of the St. Germain pear. The pears of the larger kind are mentioned as fit for eating, while the others would not be ripe for several weeks.

Erratta.—In page 210, line 23, for "Extracts," read "Extract; and line 25, for "effusions," read "effusion."